

REMARKS

Before entry of this Amendment, claims 1-33 were pending in the application. Claims 4, 5, 16, 19, 2, 23-25 and 33 have been withdrawn. After entry of this Amendment claims 1-3, 6-15, 17, 18, 21, 22 and 26-32 remain pending under examination. The number of total claims has not been increased, and the number of independent claims has not been increased beyond the number for which payment previously had been made.

Applicants repeat and restate each of the arguments previously made in support of the patentability of the pending claims under rejection and assert additional arguments stated below relevant to the amendments proposed to be made herein.

In accordance with 37 C.F.R. § 1.116(b), applicants have amended each of the independent claims 1, 6 and 26 and earnestly request entry of said amendment. The amendments to each of claims 1, 6 and 26 take note of the Examiner's statement on page 5 of the Final Office Action wherein with respect to Binks and Utracki, the Examiner noted that "[t]he surfaces have random fields of voids, spaces, protrusions, etc. at the microscopic level." Accordingly, the limitations pertaining to "restriction surfaces disposed in said flow path such that fluid delivered to said inlet always passes between said opposed restriction surfaces via said outermost peripheral edges of said restriction devices and said opening of said first continuous restriction device prior to flowing from said outlet" have been included in amended claims 1, 6 and 26. While these amendments touch the merits of the application, it is respectfully requested that they be admitted as being necessary to place the case into condition for allowance and having not been earlier presented due to the applicant's failure to appreciate the

necessity of expressly stating these limitations that were brought to Applicant's attention in the Response to Argument section of the Final Action.

Applicant has carefully considered the Examiner's Action of June 13, 2007, and the references cited therein. The following is a brief summary of the Action. Claims 1-3, 6-15, 17, 18, 21, 22 and 26-32 stand rejected under 35 U.S.C. §102(b) as anticipated by Binks (U.S. Patent No. 2,878,836). Claims 1-3, 7-15, 17, 18, 21, 22, and 26-32 stand rejected under 35 U.S.C. § 102(e) as anticipated by Utracki (U.S. Patent No. 6,550,956). Claims 1-3, 6-15, 17, 18, 21, 22 and 26-32 were rejected under 35 U.S.C. 102(b) as being anticipated by Bierman et al (U.S. Patent No.3,868,973).

For the reasons explained below, applicants respectfully traverse the rejection of claims 1-3, 6-15, 17, 18, 21, 22 and 26-32 under 35 U.S.C. 102(b) as being anticipated by Binks.

Each of independent claims 1, 6 and 26 requires:

at least one pair of opposed restriction surfaces in contact with each other in an axial direction within said housing between said inlet and said outlet, a first one of said surfaces being carried on a first continuous rigid restriction device, the second one of said surfaces being carried on a second rigid restriction device that is continuous except for at least one opening therethrough, said opening being disposed in communication with said inlet and said outlet, said restriction devices defining outermost peripheral edges, said restriction surfaces disposed in said flow path such that fluid delivered to said inlet always passes between said opposed restriction surfaces via said outermost peripheral edges of said restriction devices and said opening of said first continuous restriction device prior to flowing from said outlet;

See page 3, line 13 through page 5, line 8 and page 13, line 12 through page 15, line 18 of applicants' specification.

Each of claims 1, 6 and 26 requires the restriction surfaces to be disposed in the flow path such that fluid delivered to the inlet always passes between the opposed restriction surfaces via the outermost peripheral edges of the restriction devices and the opening of the first continuous restriction device prior to flowing from the outlet. This configuration is not present in the Binks two-piece flow control valve. In Binks, the fluid either flows directly from inlet 11 into chamber 12 and thence through central passage 15 and out the outlet 33 or via axial grooves 21 and thence axial gap 30 and thence axial grooves 24 and finally through arcuate openings 28 before exiting through the outlet 33. When the fluid flow compresses the resilient member 14 in Binks, the axial gap 30 is closed and prevents fluid from flowing out of the arcuate openings 28. As shown in Binks Figs. 3 and 6, even when the valve is inactive, the flat base 22 of the resilient member 14 presses against the inner surface of the flat base 25 of the cup-shaped member 16 so that there never is any flow via the outermost peripheral edges 23.

Indeed, the reference is the Binks document, not any actual device configured according to the Binks document. It is therefore inappropriate to argue that there may be leakage around certain of the interfacing surfaces, including between the material 14 that seals against the shoulder 19, of a device configured according to the Binks document when Binks explicitly states at column 3, line 44-50 (emphasis added):

It will be noted that in the lower range of pressures the bypass water through grooves 21 and 24 **converges with the water through the central passage 15 below the flow control unit R in the flared portion of the discharge nipple 34** thus minimizing turbulence and permitting maximum flow at the lower pressures.

Thus, according to the Binks document, the flow through the grooves 21, 24 and the arcuate openings 28 does not merge with the flow through the central passage 15 until the flow has moved downstream from the interface between flat base 22 of resilient member 14 and base 25 of cup-shaped member 16.

Applicants therefore respectfully submit that claims 1-3, 7-15, 17, 18, 21, 22, and 26-32, as presented herein, are patentable under 35 U.S.C. 102(b) over Binks.

For the reasons explained below, applicants respectfully traverse the rejection of claims 1-3, 7-15, 17, 18, 21, 22, and 26-32 under 35 U.S.C. 102(b) as being anticipated by Utracki.

As noted above, each of independent claims 1, 6 and 26 requires (emphasis added):

at least one pair of opposed restriction surfaces **in contact with each other in an axial direction** within said housing between said inlet and said outlet, * * * said restriction surfaces disposed in said flow path such that fluid delivered to said inlet **always passes between said opposed restriction surfaces** via said outermost peripheral edges of said restriction devices and said opening of said first continuous restriction device **prior to flowing from said outlet;**

The problem with the disclosure of Utracki is that no two opposed surfaces come in contact with each other when there is flow. The parallel faces 20" and 32" never touch each other. The opposed protrusions 20' and 32' never touch each other in a manner that permits flow from the inlet (bores 12a and 14a) past these protuberances 20' and 32' to the outlet (20a, 19). When the opposed protrusions 20' and 32' of Utracki touch, there is no flow from the inlet (bores 12a and 14a) that gets past these protrusions 20' and 32' to flow from the outlet (20a, 19). Thus, Utracki lacks at least one

pair of opposed restriction surfaces **in contact with each other in an axial direction** such that fluid delivered to the inlet **always passes between the opposed restriction surfaces prior to flowing from the outlet**.

Applicants therefore respectfully submit that claims 1-3, 6-15, 17, 18, 21, 22 and 26-32, as presented herein, are patentable under 35 U.S.C. 102(b) over Utracki.

For the reasons explained below, applicants respectfully traverse the rejection of claims 1-3, 6-15, 17, 18, 21, 22 and 26-32 under 35 U.S.C. 102(b) as being anticipated by Bierman et al.

At page 4, lines 6-9 of the Final Office Action, it is erroneously contended that Bierman et al discloses:

at least one pair of opposed restriction devices (14) seated within the housing between the inlet and outlet, the restriction devices comprising opposing planar surfaces in contact with each other through (16),

However, contrary to the above description of the Bierman et al disclosure, Bierman et al column 3, lines 4-7 states (emphasis added):

FIG. 1 shows a 0.12 micron **ceramic filter 14** in a plastic holder 10. **Ceramic filters** as manufactured by Flotronix **are made in cylindrical shape** as shown in various lengths for product uniformity reasons.

Thus, the opposed restriction devices 14 shown in cross-section in Bierman et al FIG. 1 for example are cylindrical, **not opposing planar surfaces in contact with each other**. Thus, even plug 16, which is not a restriction device, does not render any portion of one side of a cylindrically shaped filter 14 in contact with another cylindrically shaped portion of filter 14. The planar surfaces themselves must be in contact with each other, not connected to each other by a separate element such as plug 16. The

interpretation given Bierman et al by the Final Action is therefore manifestly inaccurate and erroneous and serves to emphasize the inadequacy of Bierman et al to anticipate the claimed invention.

Lines 17-19 on page 4 of the Final Office Action again erroneously characterize Bierman et al as follows (emphasis added):

wherein a flow path is defined within the housing such that the fluid flows to a perimeter of the flat planar members and migrates **radially inward between the opposing surfaces** to opening,

Reference may be had to Bierman et al FIG. 1 wherein the arrows pointing into inlet 22 and away from outlet 24 define the axial direction, which is the direction of the flow through the filter 14, which defines a cylindrical shape. Thus, the radial direction would be perpendicular to the direction of the arrows in Fig. 1, and the direction of the flow through the filter 14 of Bierman et al is radially outward, not radially inward. This too constitutes an inadequacy of Bierman et al to anticipate the claimed invention.

The flow rate through the device is determined by the rate at which the fluid can seep through the cylindrical walls that define the ceramic filter 14. Thus, the fluid flow does not depend upon passage between two distinct and opposed surfaces in contact with one another, but rather depends on the rate of penetration from one side of a single surface to the opposite side of that same single surface. See Bierman et al, column 3, lines 4-15.

Applicants therefore respectfully submit that claims 1-3, 6-15, 17, 18, 21, 22 and 26-32, as presented herein, are patentable under 35 U.S.C. 102(b) over Bierman et al.

With the present amendment, applicants respectfully submit that all pending claims are allowable over the art of record, and that the application is in condition for

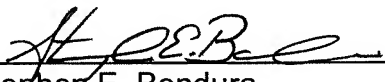
allowance. Favorable action thereon is respectfully requested. The Examiner is encouraged to contact the undersigned at his convenience should he have any questions regarding this matter or require any additional information.

If any fee or extension of time is required to obtain entry of this Amendment, the undersigned hereby petitions the Commissioner to grant any necessary time extension and authorizes charging Deposit Account No. 04-1403 for any such fee not submitted herewith.

Respectfully submitted,

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08/10/07
Date

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